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tutions in this country, is that so little is known of what others are doing and, consequently, a great deal of human effort is needlessly wasted. Much sciolistic conceit would be also avoided if this publication, with its preceding series and additional data from the 'Index Catalogue,' could be properly utilized, and medical literature would be a far more satisfactory thing than it is at present. Brown-Sequard, the celebrated French physiologist, used to bitterly complain of the amount of rediscovery of his work that he was constantly seeing in the German literature. It is only by such bibliographies as the 'Index Medicus' that much of this can be avoided. We hope the subscription list will be at least quadrupled. The very moderate subscription price, \$5, puts it within the reach of everyone who is attempting to do any medical literary work, and no one should attempt that without having at least access to its aid. We do not believe in multiplication of references or unnecessarily elaborate bibliographies, and the rule of verifying one's references by the originals, of course, is a good one to be followed, but there is no better first guide to medical literature than the 'Index Medicus' as now presented to the profession.—*Journal of the American Medical Association.*

#### THE PRESIDENCY AT THE UNIVERSITY OF VIRGINIA.

THE University of Virginia, after adhering for over eighty years to the plan of government devised by its founder, Thomas Jefferson, now decides to conform to the practice of other American universities and to elect a president. From the names suggested for the office it may be inferred that it is a 'business' president that is wanted. No doubt, the trustees of the university know best the needs of the institution, and it may be that in the modern competition in education it is necessary to sacrifice individual characteristics. An enlightened despotism, more or less tempered by trustee or overseer supervision, can accomplish much in a short time from both the financial and the educational points of view, as Harvard shows. It is possible, therefore, that the change may bring immediate prosperity to the University of Virginia.

All the same, regret must be felt that a system devised by the great Democrat with the deliberate purpose of eliminating the one-man power, a system that has proved efficient and successful in its scholarly results and in the character of the men trained under it, should disappear in the modern craving for uniformity and for quick material gains.—*New York Sun.*

#### CURRENT NOTES ON METEOROLOGY.

##### GENERAL CIRCULATION OF THE ATMOSPHERE.

AN important publication is the report on the general circulation of the atmosphere, prepared by Dr. Hildebrandsson as Part I. of the 'Rapport sur les Observations internationales des Nuages' for the International Meteorological Committee (Upsala, 1903, large 8vo., pp. 48, pls. XXII.). This is a brief historical presentation of the theories of the general circulation of the atmosphere advanced by Dove, Maury, Ferrel and Thomson, and an examination of the results of cloud observations made at stations in different parts of the world in their bearing on these theories. These results, which include the latest and best obtainable, are presented graphically in a series of twenty-two charts, for stations selected because of their position in certain critical latitudes. Thus, among these stations are found the following: San José de Costa Rica; 'Square No. 3' (Lat. 0°–10° N.; Long. 20°–30° W.); Manila; Mauritius; San Fernando and Lisbon; Havana; Lahore, Allahabad and Calcutta; Kurrachee, Bombay and Cuttack; Blue Hill; Paris; several in England, Germany and Denmark; Upsala, and others in Sweden, Norway, Siberia, China, Japan. Dr. Hildebrandsson, as is well known, has already done most important work in his study of cloud forms and cloud measurements, and he has been one of the moving spirits in the international investigation of cloud heights and velocities. He is, therefore, the meteorologist who is perhaps best fitted to undertake the discussion in hand, and his conclusions, which are based on a thorough study of data carefully compared and digested, will be received with satisfaction and accepted with confidence. So important are some of these conclusions in their bearing on

the theory of the general circulation of the atmosphere as put forward by Ferrel and Thomson, and as adopted in all the newer text-books, that it seems well to give here a translation of Dr. Hildebrandsson's summary (pp. 47-48 of the report):

"By means of direct observations the following results have been obtained: (1) Above the heat equator and the equatorial calms there is, throughout the year, a current from the east which seems to have very high velocities at great altitudes. (2) Above the trades there is an anti-trade from S. W. in the northern, and from N. W. in the southern hemisphere. (3) This anti-trade does not extend beyond the polar limit of the trade; it is deflected more and more to the right in the northern, and more and more to the left in the southern hemisphere, and finally becomes a current from the west above the crest of the tropical high pressure belts, where it descends to supply the trades. (4) The districts at the equatorial margin of the trades are partly in the trades and partly in the equatorial calms, according to the season. Above them there is, therefore, an upper monsoon: the anti-trade in winter, and the equatorial current from the east in summer. (5) From the tropical high pressure belts the air pressure on the whole decreases continuously towards the poles, at least to beyond the polar circles. Further, the air of the temperate zone is drawn into a vast 'polar whirl' turning from west to east. This whirling movement seems to be of the same nature as that in an ordinary cyclone: the air of the lower strata approaches the center, while that of the higher strata tends out from the center, and this outward tendency increases with the altitude above sea level as far up as the greatest altitudes from which we have observations. (6) The upper currents of the atmosphere in the temperate zones extend over the tropical high pressure belts, and descend there. (7) The irregularities which are noted at the earth's surface, especially in the regions of the Asian monsoons, as a whole disappear at the lower or intermediate cloud levels. (8) We must entirely abandon the notion of a vertical circulation between tropics and poles which has

up to this time been accepted in accordance with the theories of Ferrel and Thomson."

This 'vertical circulation,' to which allusion is made, refers to the view that the air, ascending near the equator, flows as an upper current across the tropical high pressure belts to the circumpolar regions, and thence returns as an intermediate current from the poles towards the equator. It is in regard to this point that the conclusions of Dr. Hildebrandsson are most interesting. Dr. Hildebrandsson expressly states that he simply presents facts, and does not discuss theories. But he does say most emphatically (p. 44): "*Il faut donc abandonner une fois pour toutes cette idée d'une circulation verticale entre les tropiques et les poles*,"—circulation qui semble du reste impossible pratiquement dans une couche dont l'épaisseur est très petite en comparaison avec les distances horizontales. Espérons que dès à présent ces 'courants polaires' et 'équatoriaux,' qui ont fait tant de confusion dans la météorologie dynamique, disparaîtront enfin complètement de la science météorologique, au moins dans le sens dans lequel on les a adoptés jusqu'ici." R. DEC. WARD.

#### THE LIGHT OF NOVA GEMMORUM.

THE light of Nova Gemmorum appears to be fluctuating like that of Nova Persei No. 2. On the evening of May 1 it appeared that its light had increased about half a magnitude during the preceding twenty-four hours. Since the measures described in the *Astronomical Bulletin* of April 22, similar measures were obtained on April 24, 25, 27, 28, 29, 30 and May 1, and gave the magnitudes 9.37, 9.67, 9.71, 9.81, 9.61, 9.76 and 9.26 respectively.

EDWARD C. PICKERING.

#### BRAIN-WEIGHT, CRANIAL CAPACITY AND THE FORM OF THE HEAD, AND THEIR RELATIONS TO THE MENTAL POWERS OF MAN.

DR. H. MATTEGKA, in Part I. of his extensive studies on this subject,\* has published some

\* 'Ueber das Hirngewicht, die Schädelkapazität und die Kopfform, sowie deren Beziehungen zur psychischen Thätigkeit des Menschen,' *Sitzb. d. kön böhm. Ges. d. Wiss.*, II. Classe, Article XX., 1902.